

**What is claimed is:**

1. A method for applying individualized calibrated tone-reproduction curves on a single page basis to enable printing of image data associated with a job having a plurality of pages, comprising the steps of:

(a) providing a plurality of calibrated tone-reproduction curves, each calibrated tone-reproduction curve corresponding to a distinct media type;

(b) assigning a first media type to a first group of pages in the job;

(c) assigning a second media type to a second group of pages in the job;

(d) receiving a page of image data to be printed;

(e) selecting a calibrated tone-reproduction curve for the received page of image data based on the assigned media type; and

(f) applying the selected calibrated tone-reproduction curve to print the page of image data.

2. The method as claimed in claim 1, further comprising the step of:

(g) printing of image data on a xerographic printing device using the selected calibrated tone-reproduction curve.

3. The method as claimed in claim 1, further comprising the step of:

(g) determining a halftone to be used in printing the image data;

said step (a) providing a plurality of calibrated tone-reproduction curves, each calibrated tone-reproduction curve corresponding to a distinct halftone type and media type combination;

said step (e) selecting a calibrated tone-reproduction curve based on the assigned  
5 media type and determined halftone type.

4. The method as claimed in claim 1, further comprising the steps of:

(g) performing a plurality of calibration operations, each calibration operation using a distinct media type;

10 (h) generating a tone-reproduction curve for each media type; and

(i) storing the generated the tone-reproduction curves;

said step (a) providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated tone-reproduction curve corresponding to a distinct media type.

15 5. The method as claimed in claim 1, further comprising the steps of:

(g) performing a plurality of calibration operations, each calibration operation using a distinct media type and halftone type combination;

(h) generating a tone-reproduction curve for each media type and halftone type combination;

20 (i) storing the generated the tone-reproduction curves; and

(j) determining a halftone to be used in printing the image data;

said step (a) providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated tone-reproduction curve corresponding to a distinct media type and halftone type combination;

said step (e) selecting a calibrated tone-reproduction curve based on the assigned  
5 media type and determined halftone type.

6. The method as claimed in claim 1, further comprising the steps of:

(g) performing a plurality of calibration operations, each calibration operation  
using a distinct media type;

10 (h) generating a tone-reproduction curve for each media type calibration;

(i) comparing the plurality of tone-reproduction curves to group tone-reproduction  
curves having similar characteristics;

(j) selecting a single tone-reproduction curve from a group of tone-reproduction  
curves having similar characteristics, each single tone-reproduction curve being the tone-  
15 reproduction curve associated with the media types that generated the tone-reproduction  
curve having similar characteristics;

(k) storing selected and non-grouped tone-reproduction curves; and

(l) generating a map to link a stored tone-reproduction curve to a media type, a  
stored tone-reproduction curve being capable of being mapped to more than one media  
20 type;

said step (a) providing a plurality of stored calibrated tone-reproduction curves,  
each stored calibrated tone-reproduction curve corresponding to a distinct media type.

7. The method as claimed in claim 1, further comprising the steps of:

(g) performing a plurality of calibration operations, each calibration operation using a distinct media type and halftone type combination;

5 (h) generating a tone-reproduction curve for each media type and halftone type combination calibration;

(i) comparing the plurality of tone-reproduction curves to group tone-reproduction curves having similar characteristics;

10 (j) selecting a single tone-reproduction curve from a group of tone-reproduction curves having similar characteristics, each single tone-reproduction curve being the tone-reproduction curve associated with the media type and halftone type combinations that generated the tone-reproduction curve having similar characteristics;

(k) storing selected and non-grouped tone-reproduction curves; and

15 (l) generating a map to link a stored tone-reproduction curve to a media type and halftone type combination, a stored tone-reproduction curve being capable of being mapped to more than one media type and halftone type combination; and

(m) determining a halftone to be used in printing the image data;

20 said step (a) providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated tone-reproduction curve corresponding to a distinct media type and halftone type combination;

said step (e) selecting a calibrated tone-reproduction curve based on the assigned media type and determined halftone type.

8. A system for applying individualized calibrated tone-reproduction curves on a single page basis to enable printing of image data associated with a job having a plurality of pages, comprising:

5 a storage device to store and provide a plurality of calibrated tone-reproduction curves, each calibrated tone-reproduction curve corresponding to a distinct media type;

an input device to assign a first media type to a first group of pages in the job and to assign a second media type to a second group of pages in the job; and

10 a processor to receiving a page of image data to be printed, to select a calibrated tone-reproduction curve for the received page of image data based on the assigned media type, and to apply the selected calibrated tone-reproduction curve to print the page of image data.

9. The system as claimed in claim 8, further comprising:

15 a xerographic printing device using the selected calibrated tone-reproduction curve to print images.

10. The system as claimed in claim 8, wherein:

said input device selects a halftone to be used in printing the image data;

20 said storage device provides a plurality of calibrated tone-reproduction curves, each calibrated tone-reproduction curve corresponding to a distinct halftone type and media type combination;

said processor selects a calibrated tone-reproduction curve based on the assigned media type and selected halftone type.

11. The system as claimed in claim 8, further comprising:

5 calibration means for performing a plurality of calibration operations, each calibration operation using a distinct media type;

said calibration means generating a tone-reproduction curve for each media type;

said storage device storing the generated the tone-reproduction curves and providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated  
10 tone-reproduction curve corresponding to a distinct media type.

12. The system as claimed in claim 8, further comprising:

calibration means for performing a plurality of calibration operations, each calibration operation using a distinct media type;

15 said calibration means generating a tone-reproduction curve for each media type;

said input device selecting a halftone to be used in printing the image data;

said storage device storing the generated the tone-reproduction curves and providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated tone-reproduction curve corresponding to a distinct halftone type and media type  
20 combination;

said processor selecting a calibrated tone-reproduction curve based on the assigned media type and selected halftone type.

13. The system as claimed in claim 8, further comprising:

calibration means for performing a plurality of calibration operations, each calibration operation using a distinct media type;

5       said calibration means generating a tone-reproduction curve for each media type calibration;

      said calibration means comparing the plurality of tone-reproduction curves to group tone-reproduction curves having similar characteristics;

10       said calibration means selecting a single tone-reproduction curve from a group of tone-reproduction curves having similar characteristics, each single tone-reproduction curve being the tone-reproduction curve associated with the media types that generated the tone-reproduction curve having similar characteristics;

      said storage device storing selected and non-grouped tone-reproduction curves;

15       said calibration means generating a map to link a stored tone-reproduction curve to a media type, a stored tone-reproduction curve being capable of being mapped to more than one media type;

      said storage device providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated tone-reproduction curve corresponding to a distinct media type.

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14. The system as claimed in claim 8, further comprising:

calibration means for performing a plurality of calibration operations, each calibration operation using a distinct media type and halftone type combination;

said calibration means generating a tone-reproduction curve for each media type and halftone type combination calibration;

5       said calibration means comparing the plurality of tone-reproduction curves to group tone-reproduction curves having similar characteristics;

10       said calibration means selecting a single tone-reproduction curve from a group of tone-reproduction curves having similar characteristics, each single tone-reproduction curve being the tone-reproduction curve associated with the media type and halftone type combinations that generated the tone-reproduction curve having similar characteristics;

      said storage device storing both selected and non-grouped tone-reproduction curves;

15       said calibration means generating a map to link a stored tone-reproduction curve to a media type and halftone type combination, a stored tone-reproduction curve being capable of being mapped to more than one media type and halftone type combination; and

      said input device selecting a halftone to be used in printing the image data;

      said storage device providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated tone-reproduction curve corresponding to a distinct media type and halftone type combination;

20       said processor selecting a calibrated tone-reproduction curve based on the assigned media type and selected halftone type.



15. The system as claimed in claim 8, further comprising:

an auto-segmentation circuit to determine a halftone to be used in printing the image data;

said storage device providing a plurality of calibrated tone-reproduction curves,  
5 each calibrated tone-reproduction curve corresponding to a distinct halftone type and media type combination;

said processor selecting a calibrated tone-reproduction curve based on the assigned media type and determined halftone type.

10 16. The system as claimed in claim 8, further comprising:

calibration means for performing a plurality of calibration operations, each calibration operation using a distinct media type;

said calibration means generating a tone-reproduction curve for each media type;  
and

15 an auto-segmentation circuit to determine a halftone to be used in printing the image data;

said storage device storing the generated the tone-reproduction curves and providing a plurality of stored calibrated tone-reproduction curves, each stored calibrated tone-reproduction curve corresponding to a distinct halftone type and media type  
20 combination;

said processor selecting a calibrated tone-reproduction curve based on the assigned media type and determined halftone type.

17. A method for applying individualized calibrated tone-reproduction curves on a single page basis to enable printing of image data associated with a job having a plurality of pages, comprising the steps of:

5 (a) performing a plurality of calibration operations, each calibration operation using a distinct media type;

(b) generating a tone-reproduction curve for each media type;

(c) storing the generated the tone-reproduction curves;

(d) assigning a first media type to a first group of pages in the job;

10 (e) assigning a second media type to a second group of pages in the job;

(f) receiving a page of image data to be printed;

(g) selecting a calibrated tone-reproduction curve for the received page of image data based on the assigned media type; and

15 (h) applying the selected calibrated tone-reproduction curve to print the page of image data.

18. The method as claimed in claim 17, further comprising the step of:

(i) printing of image data on a xerographic printing device using the selected calibrated tone-reproduction curve.